REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 10-11 and 14-27 are currently pending in this application. Claims 12-13 have been cancelled. No new matter has been added by way of the present amendment. Claim 10 has been amended to incorporate limitations from previously presented claims 12 and 13. This amendment is further supported by the Specification at, for example, page 11, lines 12-15. The amendments to claims 14-17 are merely editorial in nature to better conform the language of the claims to U.S. practice. Accordingly, no new matter has been added.

At the outset, the present application is believed to be in condition for allowance. Entry of the accompanying amendment is requested under 37 C.F.R. §1.116, as the amendment does not raise any new issues which would require further search and/or consideration by the Examiner. Furthermore, Applicants request entry of this amendment in order to place the claims in better form for consideration on Appeal.

In view of the amendments and remarks herein, Applicants respectfully request that the Examiner withdraw all outstanding rejections and allow the currently pending claims.

Issues Under 35 U.S.C. § 102(b)

Claims 10-27 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Oida et al. (U.S. 5,647,917) (hereinafter Oida '917). Applicants respectfully traverse.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of anticipation. For anticipation under 35 U.S.C.§102, the reference must teach each and

every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993). To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present". *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999). The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *Id.*

The present invention is directed, *inter alia*, to an epitaxial growth method comprising the steps of forming a III-V compound semiconductor layer comprising 3 or 4 elements on a substrate for growth, polishing the substrate so that an angle of gradient is not in the range from above 0.03° to below 0.04° with respect to (100) direction in an entire effective area of the substrate, and forming the compound semiconductor layer to have a thickness of 0.5μm or more on the substrate by using the substrate for growth, wherein the 3 or 4 elements are selected from the group consisting of AlGaAs, AlInAs, AlInGaAs and combinations thereof. Applicants have discovered that the occurrence of aberrant surface morphology can be prevented by using a substrate not having a certain plane orientation in the entire area of the substrate and growing a III-V group compound semiconductor layer comprising members from the presently claimed group.

Oida '917 discloses an InP layer epitaxially formed at a growth rate of 0.05μm/hr to 20μm/hr. Oida '917 does not explicitly or implicitly teach a step of growing a III-V compound semiconductor layer comprising 3 or 4 elements selected from the group consisting of AlGaAs, AlInAs, AlInGaAs and combinations thereof to a thickness of 0.5μm or more. Furthermore, Oida

'917 fails to disclose the use of a substrate not having a certain plane orientation in the entire area of the substrate, specifically, between 0.03° and 0.04°. Additionally, Oida '917 does not teach the use of a substrate having a dislocation density of 5000 cm^{-2} or less.

Clearly, Oida '917 fails to explicitly or implicitly teach each and every aspect of the claimed invention, as required by 35 U.S.C. §102. Accordingly, this rejection is improper.

Reconsideration and withdrawal of this rejection are thus respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and objections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Marc S. Weiner, Reg. No. 32,181 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: AUG 3 0 2007

Respectfully submitted,

By _____

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